AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~An~~ A variable flexure-based fluid filter apparatus for filtering particles from a fluid, comprising:

a variable flexure-based fluid filter body,

a fluid passage in said body,

a fluid inlet connected to said fluid passage,

a fluid outlet connected to said fluid passage,

a flexure unit connected to said passage that provides a variable size passage between said fluid inlet and said fluid outlet, and

~~means for~~ a piezo-electric stack connected to said passage and positioned proximate said flexure unit wherein said piezo-electric stack provides deflection of said flexure unit adjusting the size of said variable size passage for filtering said particles from said fluid.

2. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim 1 wherein said ~~means for adjusting the size of said variable size passage is a piezo-electric stack~~ flexure unit is a steel flexure unit.

3. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim ~~2~~ 1 including a strain gauge operatively connected to said piezo-electric stack and said flexure unit that provides feedback on said deflection of said flexure unit.

4. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim ~~2~~ 1 including a set screw operatively connected to said piezo-electric stack.

5. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim 1 including a window operatively connected to said variable size passage.

6. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim 5 wherein said window is a sapphire window.

7. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim 1 wherein said variable size passage has a size range to accommodate particles ~~are~~ from 1 micron to 500 microns in size.

8. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim 1 wherein said variable size passage accommodates particles that are beads.

9. (Currently Amended) The variable flexure-based fluid filter apparatus for filtering particles from a fluid of claim 8 wherein said beads include optically labeled tags.

10. (Currently Amended) The apparatus for filtering particles from a fluid of claim 8 wherein said beads include bead surfaces and ~~antibody/antigen reactions~~ antibodies or antigens on said bead surfaces.

11. (Currently Amended) A method of filtering particles from a fluid, comprising the steps of:

providing a fixture with a variable size passage by positioning a flexure unit that will deflect to provide said variable size passage,

positioning a piezo-electric stack proximate said flexure unit wherein said piezo-electric stack provides deflection of said flexure unit adjusting the size of said variable size passage,

introducing an inlet fluid flow stream to ~~a~~ said fixture with a variable size passage, and

causing said piezo-electric stack to provide deflection of said flexure unit setting said variable size of said variable size passage so that said fluid passes through said variable size passage but said particles do not pass through said variable size passage.

12. (Cancelled)

13. (Currently Amended) The method of filtering particles from a fluid of claim 11 including a step of providing a strain gauge operatively connected to said piezo-electric stack and wherein said step of setting said size of said variable size passage is accomplished using ~~a~~ said piezo-electric stack and ~~a~~ said strain gauge operatively connected to said piezo-electric stack.

14. (Currently Amended) The method of filtering particles from a fluid of claim 11 including a step of providing a set screw operatively connected to said piezo-electric stack and wherein said step of setting said size of said variable size passage is accomplished using ~~a~~ said piezo-electric stack and ~~a~~ said set screw operatively connected to said piezo-electric stack.

15. (Currently Amended) The method of filtering particles from a fluid of claim 11 ~~wherein said step of setting said size of said variable size passage is accomplished using a piezo-electric stack and~~ including a step of providing a window operatively connected to said variable size passage.

16. (Currently Amended) The method of filtering particles from a fluid of claim 11 wherein said step of causing said piezo-electric stack to provide deflection of said flexure unit allows said fluid to pass through said variable size passage but particles ~~are~~ from 1 micron to 500 microns in size do not pass through said variable size passage.

17. (Currently Amended) The method of filtering particles from a fluid of claim ~~11~~ 16 wherein said particles are beads.

18. (Currently Amended) The method of filtering particles from a fluid of claim ~~11~~ 16 wherein said particles are beads and including the step of attaching optically labeled tags to said beads.

19. (Currently Amended) The method of filtering particles from a fluid of claim ~~11~~ 16 wherein said particles are beads and including the step of attaching ~~antibody/antigen reactions~~ antibodies or antigens to said beads.

20. (Cancelled)

21. (Cancelled)